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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/688,546	10/17/2003	John J. Breen	16356.825 (DC-05310)	1162

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EXAMINER	
YANCHUS III, PAUL B	
ART UNIT	**PAPER NUMBER**
2116	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/22/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/688,546	BREEN ET AL.	
	Examiner	Art Unit	
	Paul B. Yanchus	2116	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 November 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*. See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This non-final office action is in response to amendments filed on 11/22/06.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art [AAPA], in view of Atkinson, US Patent no. 6,498,460.

Regarding claim 1, AAPA discloses a method of operating an information handling system (IHS) including a processor, the method comprising:

determining if a power adapter or a battery is supplying power to the IHS [paragraph 0005];

monitoring the output current of the power adapter if the power adapter is supplying power to the IHS [paragraph 0005];

monitoring the output current of the battery if the battery is supplying power to the IHS [paragraph 0005];

reducing the frequency at which the processor operates if the power output of the power adapter exceeds a first threshold current level [paragraph 0005]; and

reducing the frequency at which the processor operates if the power output of the battery exceeds a second threshold current level [paragraph 0005].

AAPA does not disclose continuously monitoring, in real time by hardware components, the output current of the power adapter or battery and instantaneously reducing the frequency at which the processor operates if the power output exceeds a threshold current level. Atkinson discloses monitoring, in real time by hardware components [Current Sense in Figure 1], output current and instantaneously reduces the frequency at which the processor operates [slowing the processor clock frequency] if the output current exceeds a threshold current level [column 5, lines 1-15]. It would have been obvious to one of ordinary skill in the art to modify the AAPA method to continuously monitor the output current, in real time by hardware components, from either the power adapter or battery in order to ensure that the system remains stable in the event of a worst case loading of the system or to ensure that certain important functions are given priority over other non-important functions when power is limited [Atkinson, column 2, lines 16-38].

Regarding claims 2 and 3, the first and second threshold values described in the prior art are inherently one of either the same level or different levels. Applicant claims reciting that the first and second threshold values are the same (claim 2) and that the first and second threshold values are different (claim 3) is construed to be an admission that the criticality does not reside in whether the first and second threshold values are the same or different and hence are obvious variations of one another.

Regarding claims 4 and 5, AAPA and Atkinson, as described above, disclose continuously monitoring the output current of the power adapter if the power adapter is supplying power to the IHS. Atkinson discloses setting the threshold according to an available system power budget [column 5, lines 1-4].

Regarding claims 6 and 7, AAPA and Atkinson, as described above, disclose continuously monitoring the output current of the battery if the battery is supplying power to the IHS. Atkinson discloses setting the threshold according to an available system power budget [column 5, lines 1-4].

Regarding claim 8, AAPA discloses a method of operating an information handling system (IHS) including a processor, the method comprising:

determining if a power adapter or a battery is supplying power to the IHS [paragraph 0005];

monitoring the output current of the power adapter if the power adapter is supplying power to the IHS [paragraph 0005];

monitoring the output current of the battery if the battery is supplying power to the IHS [paragraph 0005]; and

reducing the frequency at which the processor operates if the power output of the power adapter exceeds a predetermined threshold current level or the power output of the battery exceeds the predetermined threshold current level [paragraph 0005].

AAPA does not disclose continuously monitoring, in real time by hardware components, the output current of the power adapter or battery and instantaneously reducing the frequency at which the processor operates if the power output exceeds a threshold current level. Atkinson discloses monitoring, in real time by hardware components [Current Sense in Figure 1], output current and instantaneously reduces the frequency at which the processor operates [slowing the processor clock frequency] if the output current exceeds a threshold current level [column 5, lines 1-15]. It would have been obvious to one of ordinary skill in the art to modify the AAPA

method to continuously monitor the output current, in real time by hardware components, from either the power adapter or battery in order to ensure that the system remains stable in the event of a worst case loading of the system or to ensure that certain important functions are given priority over other non-important functions when power is limited [Atkinson, column 2, lines 16-38].

Regarding claims 9 and 10, AAPA and Atkinson, as described above, disclose continuously monitoring the output current of the battery if the battery is supplying power to the IHS. Atkinson discloses setting the threshold according to an available system power budget [column 5, lines 1-4].

Regarding claim 11, AAPA discloses a method of operating an information handling system (IHS) including a processor, the method comprising:

monitoring the output current of a power adapter which supplies power to the HIS [paragraph 0005]; and

reducing the frequency at which the processor operates if the power output of the power adapter exceeds a first threshold current level [paragraph 0005].

AAPA does not disclose continuously monitoring, in real time by hardware components, the output current of the power adapter or battery and instantaneously reducing the frequency at which the processor operates if the power output exceeds a threshold current level. Atkinson discloses monitoring, in real time by hardware components [Current Sense in Figure 1], output current and instantaneously reduces the frequency at which the processor operates [slowing the processor clock frequency] if the output current exceeds a threshold current level [column 5, lines 1-15]. It would have been obvious to one of ordinary skill in the art to modify the AAPA

method to continuously monitor the output current, in real time by hardware components, from either the power adapter or battery in order to ensure that the system remains stable in the event of a worst case loading of the system or to ensure that certain important functions are given priority over other non-important functions when power is limited [Atkinson, column 2, lines 16-38].

Regarding claim 12, AAPA discloses a method of operating an information handling system (IHS) including a processor, the method comprising:

monitoring the output current of a battery which supplies power to the HIS [paragraph 0005]; and

reducing the frequency at which the processor operates if the power output of the battery exceeds a first threshold current level [paragraph 0005].

AAPA does not disclose continuously monitoring, in real time by hardware components, the output current of the power adapter or battery and instantaneously reducing the frequency at which the processor operates if the power output exceeds a threshold current level. Atkinson discloses monitoring, in real time by hardware components [Current Sense in Figure 1], output current and instantaneously reduces the frequency at which the processor operates [slowing the processor clock frequency] if the output current exceeds a threshold current level [column 5, lines 1-15]. It would have been obvious to one of ordinary skill in the art to modify the AAPA method to continuously monitor the output current, in real time by hardware components, from either the power adapter or battery in order to ensure that the system remains stable in the event of a worst case loading of the system or to ensure that certain important functions are given

priority over other non-important functions when power is limited [Atkinson, column 2, lines 16-38].

Regarding claim 13, AAPA discloses an information handling system (IHS) comprising:

a processor [paragraphs 0002 and 0005];

a memory coupled to the processor [paragraph 0002];

an AC adapter and a battery for supplying power to the HIS [paragraph 0005]; and

a power control circuit, coupled to the AC adapter and the battery, for reducing the frequency at which the processor operates if the power output of either the AC adapter or the battery exceeds a predetermined threshold level [paragraph 0005].

AAPA does not disclose continuously monitoring, in real time by hardware components, the output current of the power adapter or battery and instantaneously reducing the frequency at which the processor operates if the power output exceeds a threshold current level. Atkinson discloses monitoring, in real time by hardware components [Current Sense in Figure 1], output current and instantaneously reduces the frequency at which the processor operates [slowing the processor clock frequency] if the output current exceeds a threshold current level [column 5, lines 1-15]. It would have been obvious to one of ordinary skill in the art to modify the AAPA method to continuously monitor the output current, in real time by hardware components, from either the power adapter or battery in order to ensure that the system remains stable in the event of a worst case loading of the system or to ensure that certain important functions are given priority over other non-important functions when power is limited [Atkinson, column 2, lines 16-38].

Regarding claims 14 and 15, Atkinson discloses setting the threshold according to an available system power budget [column 5, lines 1-4]. Atkinson is silent as to how the power supply power budget is determined. However, receiving identification signals from AC adapters and batteries to determine operating information is well known in the art and it would have been obvious to one of ordinary skill in the art to acquire the AC adapter and battery output rating from identification signals received from the AC adapter and battery.

Regarding claim 16, AAPA discloses that the processor includes a control pin for controlling the frequency at which the processor operates [paragraph 0005].

Regarding claim 17, AAPA discloses an information handling system (IHS) comprising:

a processor [paragraphs 0002 and 0005];

a memory coupled to the processor [paragraph 0002];

an AC adapter for supplying power to the HIS [paragraph 0005]; and

a power control circuit, coupled to the AC adapter, for reducing the frequency at which the processor operates if the power output of the AC adapter exceeds a predetermined threshold level [paragraph 0005].

AAPA does not disclose continuously monitoring, in real time by hardware components, the output current of the power adapter or battery and instantaneously reducing the frequency at which the processor operates if the power output exceeds a threshold current level. Atkinson discloses monitoring, in real time by hardware components [Current Sense in Figure 1], output current and instantaneously reduces the frequency at which the processor operates [slowing the processor clock frequency] if the output current exceeds a threshold current level [column 5, lines 1-15]. It would have been obvious to one of ordinary skill in the art to modify the AAPA

method to continuously monitor the output current, in real time by hardware components, from either the power adapter or battery in order to ensure that the system remains stable in the event of a worst case loading of the system or to ensure that certain important functions are given priority over other non-important functions when power is limited [Atkinson, column 2, lines 16-38].

Regarding claim 18, Atkinson discloses setting the threshold according to an available system power budget [column 5, lines 1-4]. Atkinson is silent as to how the power supply power budget is determined. However, receiving identification signals from AC adapters to determine operating information is well known in the art and it would have been obvious to one of ordinary skill in the art to acquire the AC adapter output rating from identification signals received from the AC adapter.

Regarding claim 19, AAPA discloses that the processor includes a control pin for controlling the frequency at which the processor operates [paragraph 0005].

Regarding claim 20, AAPA discloses an information handling system (IHS) comprising:

a processor [paragraphs 0002 and 0005];

a memory coupled to the processor [paragraph 0002];

a battery for supplying power to the HIS [paragraph 0005]; and

a power control circuit, coupled to the battery, for reducing the frequency at which the processor operates if the power output of the battery exceeds a predetermined threshold level [paragraph 0005].

AAPA does not disclose continuously monitoring, in real time by hardware components, the output current of the power adapter or battery and instantaneously reducing the frequency at

which the processor operates if the power output exceeds a threshold current level. Atkinson discloses monitoring, in real time by hardware components [Current Sense in Figure 1], output current and instantaneously reduces the frequency at which the processor operates [slowing the processor clock frequency] if the output current exceeds a threshold current level [column 5, lines 1-15]. It would have been obvious to one of ordinary skill in the art to modify the AAPA method to continuously monitor the output current, in real time by hardware components, from either the power adapter or battery in order to ensure that the system remains stable in the event of a worst case loading of the system or to ensure that certain important functions are given priority over other non-important functions when power is limited [Atkinson, column 2, lines 16-38].

Regarding claim 21, Atkinson discloses setting the threshold according to an available system power budget [column 5, lines 1-4]. Atkinson is silent as to how the power supply power budget is determined. However, receiving identification signals from batteries to determine operating information is well known in the art and it would have been obvious to one of ordinary skill in the art to acquire the battery output rating from identification signals received from the battery.

Regarding claim 22, AAPA discloses that the processor includes a control pin for controlling the frequency at which the processor operates [paragraph 0005].

Regarding claim 23, AAPA discloses a method of operating an information handling system (IHS) including a processor, the method comprising:

determining if a power adapter or a battery is supplying power to the IHS [paragraph 0005];

monitoring the output current of the power adapter if the power adapter is supplying power to the IHS [paragraph 0005];

monitoring the output current of the battery if the battery is supplying power to the IHS [paragraph 0005];

reducing the frequency at which the processor operates if the power output of the power adapter exceeds a first threshold current level [paragraph 0005]; and

reducing the frequency at which the processor operates if the power output of the battery exceeds a second threshold current level [paragraph 0005].

AAPA does not disclose continuously monitoring, in real time by hardware components, the output current of the power adapter or battery and instantaneously reducing the frequency at which the processor operates if the power output exceeds a threshold current level. Atkinson discloses monitoring, in real time by hardware components [Current Sense in Figure 1], output current and instantaneously reduces the frequency at which the processor operates [slowing the processor clock frequency] if the output current exceeds a threshold current level [column 5, lines 1-15]. It would have been obvious to one of ordinary skill in the art to modify the AAPA method to continuously monitor the output current, in real time by hardware components, from either the power adapter or battery in order to ensure that the system remains stable in the event of a worst case loading of the system or to ensure that certain important functions are given priority over other non-important functions when power is limited [Atkinson, column 2, lines 16-38].

Response to Arguments

Applicant's arguments with respect to claims 1-23 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul B. Yanchus whose telephone number is (571) 272-3678. The examiner can normally be reached on Mon-Thurs 8:00-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rehana Perveen can be reached on (571) 272-3676. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Paul Yanchus
February 19, 2007

REHANA PERVEEN
SUPERVISORY PATENT EXAMINER
2/20/07